DOCUMENT RESUME

ED 351 745 EA 024 359

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TITLE Overview of Schoolyear 2000: A Technology-Based System of Schooling.
PUB DATE Apr 92
NOTE 11p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 20-24, 1992).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cooperative Planning; *Educational Improvement; Educational Quality; *Educational Technology; Elementary Secondary Education; Excellence in Education; *Program Development; State Action; *Statewide Planning
IDENTIFIERS *Florida; *Schoolyear 2000 FL

ABSTRACT

An overview of Florida's statewide school improvement project, Schoolyear 2000, is provided in this paper. Schoolyear 2000, to be implemented in 1994, is a collaborative plan to improve public education in Florida through the systematic application of technology to learning and teaching. The planning and design stage has involved the Center for Educational Technology at Florida State University, the State Department of Education, various citizens' and advisory councils, teachers, and administrators. The first part provides background information regarding the project's implementation, participative design, and assumptions. The second part describes the project's approach, which centers around individualized instruction, technology, and a collaborative and total system design. Ways in which these changes will improve the quality and productivity of public education are discussed in part 3. The approach used in the design and implementation of the system and the changes made during the planning stage are described in parts 4 and 5. The final part highlights present and future obstacles to the design and implementation of the system, which involve the bureaucratic process and the politics of funding. (LMI)

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Overview of Schoolyear 2000:
A Technology-Based System of Schooling

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Prepared for the symposium, The Design and Implementation of 21st Century Schools, presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 20-24, 1992.

EA 024 359

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Overview of Schoolyear 2000:

A Technology-Based System of Schooling

1. Background Information. How and when was the project initiated? When will implementation begin? Who is involved? What are the responsibilities of the major players? How many schools are to be restructured? On what type of budget? What assumptions, if any, did you start with?

How it began...

During the 1986-87 fiscal year, the Center for Educational Technology (CET) formed a Design Committee in response to concerns raised nationally by reports such as *A Nation at Risk*, in order to propose solutions to the problems faced by public school education. Initially, only CET staff were involved, but over the ensuing years professionals from Florida State University, the Florida Department of Education (DOE), and other selected visitors were included.

In October of 1988, the Florida Commissioner of Education signed an agreement with CET to develop a collaborative plan to improve public education in Florida through the systematic application of technology to learning and teaching. DOE funded $50,000 to begin the planning of the Schoolyear 2000 (SY2000) Initiative. In June of 1989, drafting teams met to conceptualize the SY2000 model and design process.

In 1989, DOE asked CET to direct a multi-year initiative to design and implement technology-based models of schooling that would be capable of producing results far and above those possible within the context and constraints of the current educational system. During 1990, with the support of a $100,000 grant from DOE, SY2000 focused on the planning activities and data collection necessary to prepare for a major redesign initiative for Florida public schools. In the spring of 1990, the Florida Legislature appropriated $650,000 for the Initiative, now in the design and development phase.

Participative Design

To be successful at this type of large-scale design initiative, involvement from a wide range of participants is necessary. In the early beginning stages, CET staff were the only ones involved in conceptualizing a new system. Then the Florida DOE became a collaborator in the process. During the past year, CET, in collaboration with the DOE Planning Committee, Policy Advisory Council, and Public Schools Council, incorporated elements of effective schooling systems into a conceptual framework to guide future development of Schoolyear 2000. As the design and development progresses, involvement from collaborating school districts will broaden the design team base. Design teams will consist of teachers and administrators that are from collaborating school districts

throughout the State. By using a collaborative process, Schoolyear 2000 will be designed with input from teachers and administrators throughout Florida.

By using a participative process, all stakeholders are involved in concurrent design of the new system of schooling. This allows groups to work collaboratively to define and plan positions, gather information, and develop strategies to describe a new vision for change. Consensus-building is used to optimize the process and ultimately develop models that are satisfying and viable.

There are formal coordinating mechanisms that allow interaction with the staff of the initiative. These include DOE Planning Committee and resource persons, a Policy Advisory Council, student resource groups, a National Panel of Experts, the Public Schools Council and Collaborating Schools, focus groups, and the Florida Joint Developmental Research School Planning, Articulation, and Evaluation Committee.

Collaborating School Districts

All 67 Florida school districts, university developmental research school, regional education consortia, and the Florida School for the Deaf and the Blind have been invited to participate in the Florida Schoolyear 2000 Initiative at one or more levels. At the first level (Level 1) of participation, each organization was invited to designate a person to serve on the SY2000 Public Schools Council. To date, 61 school districts, four university developmental research schools, and two educational consortia have members on the Council. At the next level of participation (Level 2), public school representatives may also be selected to participate on design teams to develop basic concepts or specifications for system components. The highest level (Level 3) involves the participation of schools as operational test sites. Schools desiring to be considered for this level had to submit a proposal and demonstrate that they had met certain specified criteria in order to be selected for this level of participation. On January 17, 1992, seven Florida school districts were selected to be at Level 3 collaboration.

The Florida Commissioner of Education has recommended in her 1992-93 budget that each of the districts receive funds to help offset travel, training, and other expenses related to the design and development work.

Implementation

The actual implementation of the total Schoolyear 2000 system is targeted to begin in 1994. At that time, the first operational test of the model with students will be started in three to seven operational test sites across the State. Current plans are to start with the youngest students, ages three through eight. Programs for older students will be added, until a complete model of schooling is available for all students, ages three through graduation. Although total implementation is many months away, the SY2000 staff is currently trying to find components of the total system that can be implemented sooner, in order to practice, rehearse, and refine the consensus process.

Assumptions

The following assumptions upon which the design of Schoolyear 2000 is based are listed below. Other assumptions may be added as design continues.

1. It is the proper role of the Florida Department of Education, in collaboration with others, to provide the leadership in developing new models of schooling that will be responsive to future needs.

2. As the educational delivery paradigm currently in use throughout Florida nears its full potential, further improvements are highly unlikely without fundamental change.

3. All major sectors of the economy that have had large scale successes or improvements in the past three decades have done so through the use of advanced technologies. Advances in education will also only come about through creative uses of technology.

4. Technologies can be designed to make major improvements in Florida education.

5. Substantial improvements in student and staff productivity are required to keep education current within predictable budget availability. Such improvements can only be made through effective exploitation of technology.

6. Technology should be used to allow for more productive and effective processes rather than to automate the old processes.

7. Society has changed fundamentally since the current educational paradigm was implemented. New, non-traditional approaches to education are required to serve society in the next century (Schoolyear 2000, 1992).

2. What attributes make your school system different than traditional systems?

The Approach

Schoolyear 2000 uses a unique approach by setting a list of goals for students, establishing what it is that we want them to know. A Schoolyear 2000 school would then be designed to help each student meet those goals. Moreover, SY2000 will implement technology-based models of schooling that will allow students to use learning, creative, and research tools to become independent learners. The technology-based models will use design principles derived from modern research in teaching, learning, motivation, and instructional design. A quality system that meets international quality assurance standards will guide the total schooling process.

A Shift in the Education Paradigm

Schoolyear 2000 is a system that will be built to the benefit of students. In a Schoolyear 2000 school, individual assignments will be based on individual needs. Students work at the pace that allows them to learn their subject, not at a pace determined by a classroom of students following together with the teacher.

Technology as the Center

By integrating technology into the schooling program, students will be allowed to learn more efficiently and make better use of their time through self-paced learning. Technology also aids the teacher by making instruction interesting to students.

Quality Systems

Schoolyear 2000 will apply quality standards to its schools, much the way that business has done. This means that schools will have to be responsive to their customer needs, continuously improving the way learning is accomplished. Applying quality will also reduce waste and increase the productivity of students and teachers in the system.

Collaborative Design

Unlike many new school programs, Schoolyear 2000 is not a mandate handed down from administrators. Rather, it is an initiative being designed by a broad-based group of teachers, administrators, business and elected leaders, state education officials, and university researchers across the State of Florida.

Total System Design

Schoolyear 2000 is not just a reform of the public school classroom curriculum. It is the redesign of the entire education process, including other areas such as staff development and student services. Through a systems approach, the education of students is viewed as a complex system made up of interacting components which must be designed to work together as a complete system in the most efficient and effective manner.

A Complete Product

Schoolyear 2000 will not be a hodge-podge of fragmented off-the-shelf products. Instead, tools and products will be designed to provide each Schoolyear 2000 school with a complete package -- from computer hardware and software to actual coursework.

3. How will these changes improve the quality and productivity of public education?

Currently in the State of Florida, more children are entering school with the probability of failure. Florida is experiencing a decline in the number of students who

graduate, and this condition is expected to worsen over time. Furthermore, current data suggest a decline in capabilities of those who do graduate. Not only is this a problem for our immediate concern, the problem will foreseeably get worse. Considering that in the next century the fastest growing occupations will require employees who have much higher skills and abilities than even the current market requires, the problem must not only be "fixed" but large improvements must be made. Add the extra burden of financial shortfalls that impinge upon resources for these improvements and the task is insurmountable (Branson, 1992).

Schoolyear 2000 is a technology-based, system-wide change that integrates all critical components and improves quality and productivity for a major portion of what is taught. Because SY2000 will be able to adapt to changing demographics and increased expectations and apply state-of-the-art technology, management principles, learning psychology, and instructional design to the process of educating students, it will accommodate ALL Florida students, allowing for ALL students to learn and to do it much more effectively and efficiently. In addition, it will be able to use current existing levels of dollars for education in such a way as to be much more cost effective than the current system.

4. What major steps will be, are being, or have been taken during the design and implementation of your system? How would you characterize your approach?

Design Process

Schoolyear 2000 employs a modified Banathy design inquiry process for strategic planning and design. Strategic planning and design is intended to be an active, creative, disciplined, and decision-oriented process. Using participative and shared decision-making together with iterative development cycles for continual design improvement, SY2000 will both involve a broad designers base and a way to continually improve both the process and the product. In addition, Schoolyear 2000 will use a total systems approach to the design and development of a new system of schooling, taking into account all components that affect the educational process.

Design Inquiry

The design inquiry process is a set of strategies, procedures, tools and products used to design, develop, and implement large-scale system change. Being a question-based process, participants pose questions to illustrate and clarify design requirements. Major components of the process include inquiry, participative dialectics and consensus building, and iterative revision.

Basic Steps in the Process:

1. Describe the context of design.
2. Formulate the purposes and goals of alternative models to be designed and prescribe desired results.
3. Establish performance requirements for the new model.
4. Formulate and write design specifications.
5. Identify potential contractors and suppliers who will build major components to specification.
6. Devise and implement a plan for the development of selected alternative model(s).
7. Test selected model(s) at operational test sites.
8. Monitor and evaluate the model.
9. Revise and improve as needed.
10. Expand to other qualified sites.

Design Requirements

The following is a beginning list of design requirements for the new model of schooling. Other design requirements will be added as the collaborative process continues. These requirements must:

- Treat students as individuals, allowing for learning and growth at developmentally appropriate rates.
- Provide an opportunity for all children to reach their potentials in academic, social, personal, and career opportunities.
- Provide an integrated curriculum that enables students to master basic objectives and to achieve thinking and problem solving skills.
- Meet the criterion of being incrementally improvable as new knowledge about development, instruction, and socialization becomes available.
- Minimize the lag time between the discovery of new knowledge and its incorporation into the curriculum.
- Minimize the environmental impact and potential hazards involved in schooling.

- Optimize the use of simulations and hands-on experiences to ensure the most cost-effective solutions to learning.
- Involve communities in the concurrent design process.
- Adapt to existing facilities and provide specifications for remodeling or constructing facilities.

5. How has the initial conceptualization of the design and implementation process evolved during the course of your initiative?

There have not been any major changes from initial conceptualization of the design to what is currently being done. There were a few minor revisions, however. One of these changes concerns what now are our separate operations model and design model. In the original conceptualization of these, they were combined into one large model. At that time, the model was viewed as an overall operations model with a subcomponent of management that would involve the design process itself. But this has been revised into two separate models of (1) the operations model that includes 10 subsystems and two functions -- what we want it to look like, and (2) the design process -- how we will go about getting there.

A second change lies in the layout of the subsystems within the operations model. These subsystems have been periodically fine-tuned to now include 10 as well as the functional components of a quality system and an electronic system.

And lastly, the design process that we are using has evolved from an initial consideration of traditional linear phases to what is termed "concurrent design." Concurrent design or concurrent instructional systems development (ISD) means the simultaneous, multi-level, multi-phase design of the system (R. K. Branson, personal communication, March 5, 1992). Standard ISD models that go through a series of design steps in a linear fashion are considered inappropriate and inadequate for approaching this type of large-scale design process.

6. What were, or what do you see as the major obstacles facing the design and implementation of your system?

In spite of the high emphasis on technology within SY2000, there have been no technical obstacles facing us for what we are envisioning. All the technology currently exists to accomplish most anything we design.

The obstacles that we *have* encountered have been bureaucratic. For example, it was a difficult and time-consuming process to convince the Department of Education to commit to what we are doing. It took a full two years to reach the point where DOE would come out and announce the program and elicit the collaborating school districts to write proposals.

Perhaps the foremost obstacle facing Schoolyear 2000 now and in the future is the need for continued funding of the initiative by the Florida Legislature. This is a particularly difficult one to overcome given all of the current budget constraints facing the State. It is a challenge to present Schoolyear 2000 in such a way that it will be perceived to be an absolutely needed solution to a very prevalent problem and that it will require adequate time to be designed. Many leaders around the State, being in politically pressed positions, want a QUICK solution to the current problem in education -- they want it fixed "yesterday." Given that large-scale system-wide change simply cannot be accomplished overnight, it is necessary to invent ways in which SY2000 will be able to make smaller incremental improvements now, without sacrificing the long-term design of the product. Furthermore, since State monies are in limited supply, when monies *are* allotted to us, less goes toward other constituencies. Basically, whoever has the most political power gets the largest amount of funds.

Note: Information for this paper has been derived and adapted from Schoolyear 2000 documents produced by the Center for Educational Technology at Florida State University.

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